

# Annual Drinking Water Quality Report

## Swearengin Water System

January-December 2019

### Is my water safe?

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. The Swearengin Water System purchases surface water from North Marshall Utilities and Scottsboro Waterworks, Sewer and Gas Board. The surface water which is pumped from Guntersville Lake and the Tennessee River goes through a highly technical process of coagulation, flocculation, sedimentation, filtration, and chlorination for disinfection purposes. The required residual is maintained to protect your drinking water from any possible outside contaminants.

Swearengin Water System routinely utilizes a Bacteriological Monitoring Plan and a Cross Connection Policy is in place to insure good safe drinking water for our customers. North Marshall Utilities and Scottsboro Waterworks, Sewer and Gas Boards have completed a Source Water Assessment Plan which is available at their offices for review. These reports provide information about potential sources of contamination and are set up to help protect our sources.

We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the 3<sup>RD</sup> Monday of the month at the Swearengin Water System office, 5100 Swearengin Road in Scottsboro and begin at 7:00 p.m.

### The members of the Board of Directors are:

**Lelani Moore, President**                      **Kenneth Albrecht, Vice-President**  
**Randall Smith**   **Perry Stapler**   **Joe Franks**

### Important Drinking Water Definitions:

**Action Level (AL)** - The concentration of a contaminant that triggers treatment or other requirements that a water system shall follow.

**Maximum Contaminant Level (MCL)** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG)** - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Millirems per year (mrem/yr)** - Measure of radiation absorbed by the body.

**Nephelometric Turbidity Unit (NTU)** - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Parts per million (ppm) or Milligrams per liter (mg/L)** - One part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb) or Micrograms per liter (µg/L)** - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Parts per trillion (ppt) or Nanograms per liter (ng/L)** - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**Parts per quadrillion (ppq) or Picograms per liter (pg/L)** - One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.

**Treatment Technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water.

**Threshold Odor Number (T.O.N.)** - The greatest dilution of a sample with odor-free water that still yields a just-detectable odor.

**Variations & Exemptions** - ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.

### Explanation of reasons for variance/exemptions

Based on a study conducted by ADEM with the approval of the EPA a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus monitoring for these contaminants was not required.

Swearengin Water System, North Marshall Utilities and Scottsboro Waterworks, Sewer and Gas Boards routinely monitor for contaminants in your drinking water according to Federal and State laws. Unless otherwise noted, the data presented in the following tables show the results of our monitoring period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2019

The table below lists all of the drinking water contaminants that we detected.

# Table of Primary Contaminants

At high levels some primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detections.

CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED
<b>Bacteriological</b>			Endothall(ppb)	100	ND
Total Coliform Bacteria	< 5%	ND	Endrin(ppb)	2	ND
Turbidity (North Marshall)	TT	0.09	Epichlorohydrin	TT	ND
Turbidity (Scottsboro)	TT	0.08	Ethylbenzene(ppb)	700	ND
Fecal Coliform & E. coli	0	ND	Ethylene dibromide(ppt)	50	ND
Fecal Indicators (enterococci or coliphage)	TT	ND	Glyphosate(ppb)	700	ND
<b>Radiological</b>			Haloacetic Acids(ppb)(Swearengin)	60	48.0
Beta/photon emitters (mrem/yr)	4	ND	Heptachlor(ppt)	400	ND
Alpha emitters (pci/l) (North Marshall 2012)	15	6.80	Heptachlor epoxide(ppt)	200	ND
Combined radium (pci/l)	5	ND	Hexachlorobenzene(ppb)	1	ND
Uranium(pci/l)	30	ND	Hexachlorocyclopentadiene(ppm)	50	ND
<b>Inorganic</b>			Lindane(ppt)	200	ND
Antimony (ppb)	6	ND	Methoxychlor(ppb)	40	ND
Arsenic (ppb)	10	ND	Oxamyl [Vydate](ppb)	200	ND
Asbestos (MFL)	7	ND	Pentachlorophenol(ppb)	1	ND
Barium (ppm)	2	ND	Picloram(ppb)	500	ND
Beryllium (ppb)	4	ND	PCBs(ppt)	500	ND
Bromate(ppb)	10	ND	Simazine(ppb)	4	ND
Cadmium (ppb)	5	ND	Styrene(ppb)	100	ND
Chloramines(ppm)	4	ND	Tetrachloroethylene(ppb)	5	ND
Chlorine(ppm)(North Marshall)	4	2.40	Toluene(ppm)	1	ND
Chlorine(ppm)(Scottsboro)	4	2.20	TOC (North Marshall)	TT	1.80
Chlorine(ppm)(Swearengin)	4	1.94	TTHM(ppb) (Swearengin)	80	64.0
Chlorine dioxide(ppb)	800	ND	Toxaphene(ppb)	3	ND
Chlotite(ppm)	1	ND	2,4,5-TP (Silvex)(ppb)	50	ND
Chromium (ppb)	100	ND	1,2,4-Trichlorobenzene(ppb)	70	ND
Copper (ppm) (Swearengin )	AL=1.3	0.05	1,1,1-Trichloroethane(ppb)	200	ND
Cyanide (ppb)	200	ND	1,1,2-Trichloroethane(ppb)	5	ND
Fluoride (ppm) (North Marshall)	4	ND	Trichloroethylene(ppb)	5	ND
Fluoride (ppm) (Scottsboro)	4	1.03	Vinyl Chloride(ppb)	2	ND
Lead (ppb)	AL=15	ND	Xylenes(ppm)	10	ND
Mercury (ppb)	2	ND			
Nitrate (ppm) (North Marshall)	10	0.53			
Nitrate (ppm) (Scottsboro)	11	0.57			
Nitrite (ppm) (North Marshall)	1	ND			
Total Nitrate & Nitrite (Scottsboro)	10	ND			
Selenium(ppb)	50	ND			
Thallium(ppb)	2	ND			
<b>Organic Chemicals</b>					
Acrylamide	TT	ND			
Alachlor(ppb)	2	ND			
Atrazine(ppb)	3	ND			
Benzene(ppbv)	5	ND			

Benzo(a)pyrene[PHAs](ppt)	200	ND
Carbofuran(ppb)	40	ND
Carbon Tetrachloride(ppb)	5	ND
Chlordane(ppb)	2	ND
Chlorobenzene(ppb)	100	ND
2,4-D	70	ND
Dalapon(ppb)	200	ND
Dibromochloropropane(ppt)	200	ND
0-Dichlorobenzene(ppb)	600	ND
p-Dichlorobenzene(ppb)	75	ND
1,2-Dichloroethane(ppb)	5	ND
1,1-Dichloroethylene(ppb)	7	ND
Cis-1,2-Dichloroethylene(ppb)	70	ND
trans-1,2-Dichloroethylene(ppb)	100	ND
Dichloromethane(ppb)	5	ND
1,2-Dichloropropane(ppb)	5	ND
Di-(2-ethylhexyl)adipate(ppb)	400	ND
Di(2-ethylhexyl)phthalates(ppb)	6	ND
Dinoseb(ppb)	7	ND
Dioxin[2,3,7,8-TCDD](ppq)	30	ND
Diquat(ppb)	20	ND

**Table of Detected Drinking Water Contaminants**

CONTAMINANT	MCLG	MCL	Range			Amount Detected		Likely Source of Contamination
<b>Bacteriological Contaminants      January - December 2019</b>								
Turbidity (North Marshall)	0	TT				0.09	NTU	Soil runoff
Turbidity (Scottsboro)	0	TT				0.08	NTU	Soil runoff
<b>Radiological Contaminants      January - December 2019</b>								
Alpha emitters (North Marshall 2012)	0	15	ND		6.80	6.80	pCi/L	Erosion of natural deposits
<b>Inorganic Contaminants      January - December 2019</b>								
Chlorine (North Marshall)	MRDLG 4	MRDL 4	1.40	-	2.40	2.40	ppm	Water additive used to control microbes
Chlorine (Scottsboro)	MRDLG 4	MRDL 4	0.70	-	2.20	2.20	ppm	Water additive used to control microbes
Chlorine (Swearengin)	MRDLG 4	MRDL 4	0.71	-	1.94	1.94	ppm	Water additive used to control microbes
Fluoride (North Marshall)	4	4	ND	-	ND	ND	ppm	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Fluoride (Scottsboro)	4	4	0.59	-	0.90	0.90	ppm	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories

Nitrate (as N) (North Marshall)	10	10	0.53	-	0.53	0.53	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate (as N) (Scottsboro)	10	10	0.38	-	0.57	0.57	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Turbidity (North Marshall)	N/A	TT				0.09	NTU	Soil runoff
Turbidity (Scottsboro)	N/A	TT				0.08	NTU	Soil runoff
<b>Organic Contaminants January - December 2019</b>								
Haloacetic Acids (HAA5) (Swearengin)	N/A	60	8.4	-	48.0	31.3	ppb	By-product of drinking water chlorination
Total Organic Carbon (TOC) (North Marshall)	N/A	TT	0.90	-	1.80	1.80	TT	Naturally present in the environment
Total trihalomethanes (TTHM) (Swearengin)	0	80	12.7	-	64.0	46.7	ppb	By-product of drinking water chlorination
<b>Secondary Contaminants January - December 2019</b>								
Aluminum (Scottsboro)	N/A	0.2	ND	-	0.051	0.051	ppm	Erosion of natural deposits or as a result of treatment with water additives
Aluminum (North Marshall)	N/A	0.2	0.05	-	0.05	0.05	ppm	Erosion of natural deposits or as a result of treatment with water additives
Chloride (North Marshall)	N/A	250	11.4	-	11.4	11.4	ppm	Naturally occurring in the environment or as a result of agricultural runoff
Chloride (Scottsboro)	N/A	250	10.4	-	12.7	12.7	ppm	Naturally occurring in the environment or as a result of agricultural runoff
Sulfate (North Marshall)	N/A	250	11.3	-	11.3	11.3	ppm	Naturally occurring in the environment
Sulfate (Scottsboro)	N/A	250	5.79	-	11.6	11.6	ppm	Naturally occurring in the environment
Total Dissolved Solids (North Marshall)	N/A	500	168.00	-	168.00	168.00	ppm	Erosion of natural deposits
Total Dissolved Solids (Scottsboro)	N/A	500	125.00	-	224.00	224.00	ppm	Erosion of natural deposits
Zinc (North Marshall)	N/A	5	0.08	-	0.08	0.08	ppm	Erosion of natural deposits
<b>Special Contaminants January - December 2019</b>								
Calcium (Scottsboro)	N/A	N/A	22.1	-	32.7	32.7	ppm	Erosion of natural deposits

Carbon Dioxide (Scottsboro)	N/A	N/A	1.3	-	1.9	1.9	ppm	Erosion of natural deposits
Magnesium (Scottsboro)	N/A	N/A	3.29	-	3.69	3.69	ppm	Erosion of natural deposits
pH (North Marshall)	N/A	N/A	7.91	-	7.91	7.91	SU	Naturally occurring in the environment or as a result of treatment with water additives
pH (Scottsboro)	N/A	N/A	6.80	-	7.70	7.70	SU	Naturally occurring in the environment or as a result of treatment with water additives
Sodium (North Marshall)	N/A	N/A	6.61	-	6.61	6.61	ppm	Naturally occurring in the environment
Sodium (Scottsboro)	N/A	N/A	2.48	-	8.25	8.25	ppm	Naturally occurring in the environment
Specific Conductance (Scottsboro)	N/A	<500	196.00	-	209.00	209.00	umhos	Naturally occurring in the environment or as a result of treatment with water additives
Sulfate (North Marshall)	N/A	N/A	9.91	-	9.91	9.91	ppm	Naturally occurring in the environment
Sulfate (Scottsboro)	N/A	N/A	5.79	-	11.6	11.6	ppm	Naturally occurring in the environment
Total Alkalinity (Scottsboro)	N/A	N/A	61.0	-	78.4	78.4	ppm	Erosion of natural deposits
Total Hardness (as CaCO <sub>3</sub> ) (North Marshall)	N/A	N/A	72.6	-	72.6	72.6	ppm	Naturally occurring in the environment or as a result of treatment with water additives
Total Hardness (as CaCO <sub>3</sub> ) (Scottsboro)	N/A	N/A	70.5	-	95.1	95.1	ppm	Naturally occurring in the environment or as a result of treatment with water additives
<b>Unregulated Contaminants      January - December 2019</b>								
Bromodichloromethane (Swearengen)	N/A	N/A	3.77	-	3.82	3.82	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Dibromochloromethane(Swearengen)	N/A	N/A	ND	-	2.29	1.15	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Chloroform (Swearengen)	N/A	N/A	16.0	-	17.3	17.3	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk. The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and it can pick up substances resulting from the presence of animals or from human activities.

We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

**Total Coliform:** The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

**Lead in Drinking Water:** "If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Swarengin Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>."

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk should seek advice about drinking water from their health care providers. EPA (Environmental Protection Agency)/CDC (Center of Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline. All Drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at the Swarengin Water System work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

**For more information contact:**

**Mr. Tracy Willmon, Certified Operator Manager**

**Or**

**Ms. Tonia Willmon, Office Manager**

**Swarengin Water System**

**5100 Swarengin Road**

**Scottsboro, AL 35769**

**Telephone: 256-728-2782**

**7:45 a.m. – 4:00 p.m. Monday, Tuesday, Wednesday, and Friday**

**Office closed during lunch from 11:30 a.m. – 12:30 p.m.**

**Closed Thursdays**